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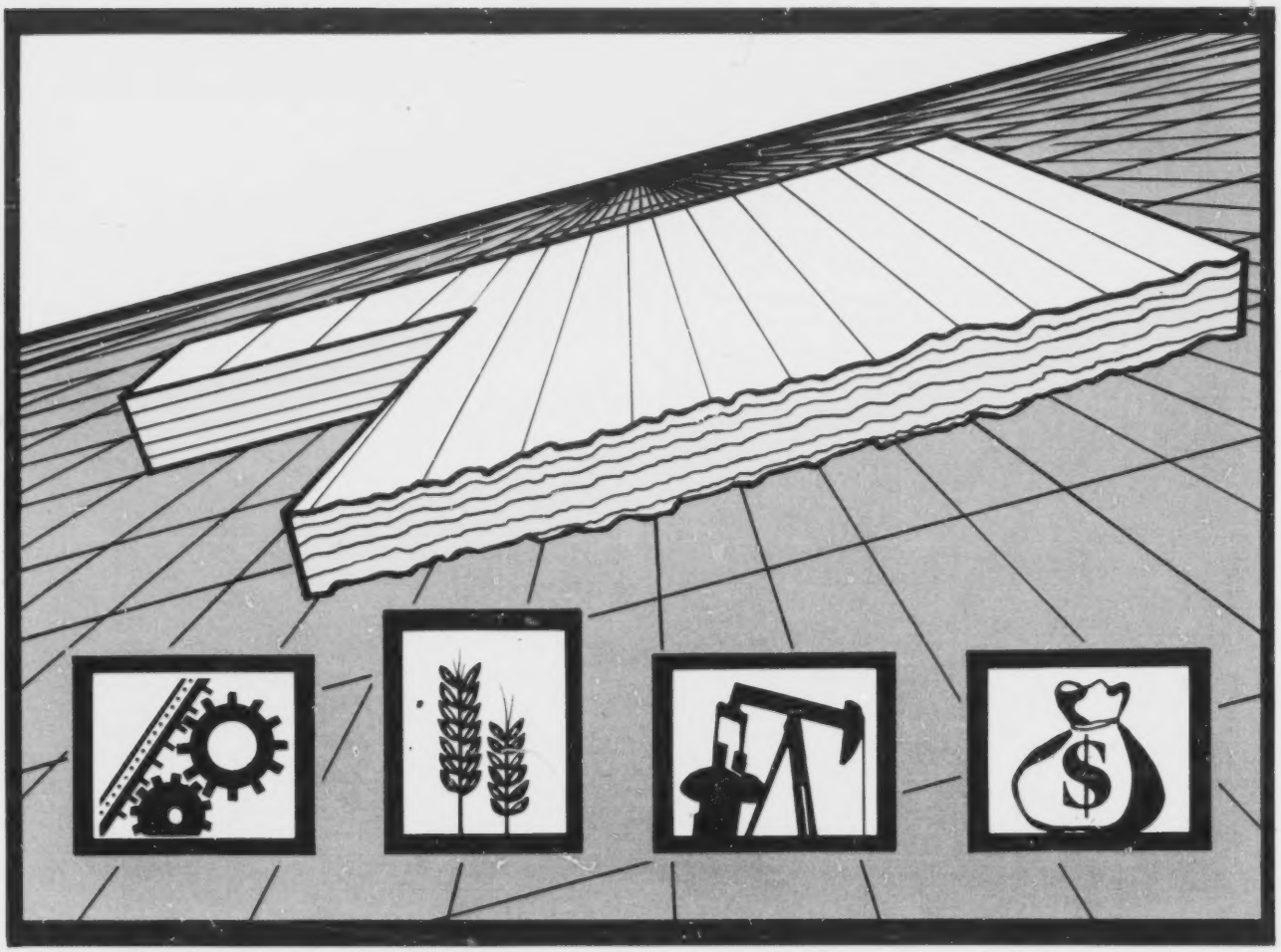

The *Oklahoma Business Bulletin* is now combined with the *Review of Regional Economics and Business*. There will be four quarterly expanded editions of the *Bulletin* which will contain both articles and the usual statistical information on Oklahoma and its major centers. The remaining eight monthly issues of the *Bulletin* will contain only the statistical summaries, although articles on timely subjects might also appear in these interquarterly issues. The combination of these two publications will provide a more thorough examination of economic problems prevalent in Oklahoma as well as continuing to provide economic data which has long been presented in the *Oklahoma Business Bulletin*.

This publication change at the Center has been assisted by funding provided by the Robert S. and Grayce B. Kerr Foundation Inc., for which the Center is most grateful.

We at the Center are most hopeful that the Oklahoma oriented articles will assist State leaders and citizens in their efforts to solve the economic problems now facing the State.

George W. England
Director

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The Editorial Review Board welcomes original manuscripts, studies, and research reports from persons in both the public and private sector in any area of economics and business administration. The editorial policy of the *Bulletin* promotes a free exchange of ideas and analyses. Accordingly, the contents do not necessarily reflect the views of the editor or the publisher.

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SUMMARY OF INDICATORS

Category	12 Mos. '87	12 Mos. '86	Dec. '87	Percentage Change 12 Mos. '87/'86	Percentage Change Dec./Nov. '87
Personal Income (Monthly Average)[a]					
Unadjusted ($000,000)	3,448	3,391	3,547	1.7	0.7
Adjusted for CPI ($000,000)	1,013	1,032	1,026	-1.9	0.8
Crude Oil Production (000 bbl)[b]	132,035	143,075	9,521	-7.7	-11.0
Industrial Power Sales (000,000 Kwh)[c]	8,216	8,069	685	1.8	0.0
Total Bank Deposits ($000,000)[d]					
Demand	7,518	7,384	7,569	1.8	1.6
Savings	25,324	26,257	24,567	-3.6	-0.5
Savings and Loan Associations ($000,000)					
Assets	10,031.2	10,047.2	10,130.4	-0.2	0.3
Mortgage Loans Closed	902.9	1,399.7	52.4	-35.5	8.9
General Business Index	94.1	91.1	94.9	3.3	0.3

[a] Includes revisions.
[b] 12 months data.
[c] Sales of larger privately owned utility companies.
[d] Total deposits of all depository institutions.

SELECTED ECONOMIC INDICATORS

Category	12 Mos. '87	12 Mos. '86	Dec. '87	Percentage Change 12 Mos. '87/'86	Percentage Change Dec./Nov. '87
PERMIT-AUTHORIZED CONSTRUCTION					
Residential—Single Family					
Dollar Value ($000)	319,249	353,930	12,648	-9.8	-30.3
Number of Units	4,734	5,833	177	-18.8	-34.0
Residential—Multi Family					
Dollar Value ($000)	23,302	77,578	1,174	-70.0	—
Number of Units	932	2,412	55	-61.4	—
Nonresidential					
Commercial ($000)	177,666	150,574	9,014	18.0	-20.3
Industrial ($000)	21,212	37,912	675	-44.1	-17.0
Institutional ($000)	48,653	57,198	685	-14.9	-86.8
Nonbuilding					
Streets and Highways ($000)	208,267	182,057	6,924	14.4	-78.1
All Other Nonbuilding ($000)	8,796	10,972	207	-19.8	-32.6
Total Construction ($000)	807,145	870,221	31,327	-7.2	-53.7
EMPLOYMENT TRENDS					
Total Labor Force (000)[a]	1,564.0	1,593.0	1,546.5	-1.8	0.2
Total Employment (000)	1,449.0	1,462.0	1,453.6	-0.9	0.5
Agriculture (000) P	37.2	41.1	37.3	-9.4	9.7
Nonagriculture (000)	1,411.8	1,420.9	1,416.3	-0.6	0.3
Manufacturing (000)	158.7	162.8	159.6	-2.5	-0.2
Mining (000)	53.5	55.1	54.4	-2.9	0.0
Government (000)	251.4	251.2	254.8	0.1	0.0
Contract Construction (000)	39.5	40.0	39.7	-1.2	-1.2
Services (000)	227.2	224.5	227.5	1.2	-0.1
Retail Trade (000)	213.7	217.1	216.0	-1.6	0.9
Unemployment Rate (%)	7.4	8.2	6.0	—	—
Average Weekly Hours					
Manufacturing (Per Worker)	41.2	41.3	41.8	-0.3	0.2
Average Weekly Earnings					
Manufacturing ($ Per Worker)	413.63	404.74	428.87	2.2	1.7
Contract Construction ($ Per Worker)	429.21	408.01	411.06	5.2	-6.5
Retail Trade Excluding Eating and Drinking Places($ Per Worker)	190.33	188.79	183.26	0.8	-1.1

Note: Includes revisions in some previous months. Streets and highways data reflect construction started in current month(s).
P Wage and salary employment data preliminary.
[a] Civilian Labor Force.

RETAIL TRADE IN METRO AREAS AND STATE
($000)

Retail Trade	12 Mos. '87 Adjusted	12 Mos. '86 Adjusted	Dec. '87 Adjusted	Dec. '87 Unadjusted	Percentage Change 12 Mos. '87/'86 Adjusted	Percentage Change Dec./Nov. '87 Adjusted	Percentage Change Dec./Nov. '87 Unadjusted
OKLAHOMA CITY MSA							
Food	2,271,470	2,284,471	189,072	192,377	-0.6	-11.0	-4.6
Apparel	175,888	186,964	14,664	25,191	-5.9	0.5	64.1
General Merchandise	715,930	722,638	63,161	111,018	-0.9	-2.0	61.3
Furniture	287,983	273,664	24,364	29,715	5.2	-7.3	8.8
Lumber	169,098	197,294	14,583	10,893	-14.3	13.3	-9.5
Auto Dealers	1,553,042	1,810,085	123,421	116,536	-14.2	11.9	-2.4
Service Stations	205,464	211,672	15,470	15,137	-2.9	-16.1	-16.6
All Other	716,753	702,637	70,352	99,811	2.0	15.5	70.6
Total	6,095,628	6,389,425	515,087	600,678	-4.6	-1.0	15.2
TULSA MSA							
Food	1,326,153	1,350,491	109,212	116,169	-1.8	-2.0	10.8
Apparel	166,348	169,835	12,418	21,286	-2.1	-7.4	44.3
General Merchandise	594,572	592,235	55,309	85,260	0.4	4.0	58.1
Furniture	229,165	244,332	17,119	20,984	-6.2	-24.4	-0.6
Lumber	139,444	161,385	11,932	10,256	-13.6	2.7	-8.7
Auto Dealers	903,630	1,053,191	71,812	67,805	-14.2	11.9	-2.4
Service Stations	168,792	173,906	12,709	12,436	-2.9	-16.1	-16.6
All Other	71,527	81,351	8,368	14,868	-12.1	136.1	151.1
Total	3,599,631	3,826,726	298,879	349,064	-5.9	1.3	17.9
ENID MSA							
Food	112,563	116,338	9,223	9,659	-3.2	-1.3	6.4
Apparel	17,972	18,307	1,358	2,025	-1.8	-8.3	42.7
General Merchandise	48,877	48,589	4,300	7,545	0.6	1.5	69.6
Furniture	12,022	11,956	992	1,148	0.6	-12.1	5.7
Lumber	15,790	17,635	1,112	747	-10.5	-19.3	-50.9
Auto Dealers	88,888	103,587	7,064	6,670	-14.2	11.9	-2.4
Service Stations	15,147	15,609	1,133	1,116	-3.0	-16.8	-16.6
All Other	36,176	33,958	3,457	5,142	6.5	15.6	74.6
Total	347,435	365,979	28,639	34,052	-5.1	1.4	18.8
LAWTON MSA							
Food	191,901	186,917	16,293	15,941	2.7	-2.2	1.3
Apparel	21,691	20,486	1,695	2,745	5.9	-1.7	61.4
General Merchandise	140,834	121,455	12,385	20,346	16.0	1.7	58.1
Furniture	27,090	31,498	2,150	2,500	-14.0	-19.9	-5.7
Lumber	21,747	23,137	2,039	1,551	-6.0	-35.8	-52.3
Auto Dealers	118,454	138,064	9,413	8,888	-14.2	11.9	-2.4
Service Stations	10,340	10,643	773	762	-2.8	-16.9	-16.6
All Other	44,213	47,968	6,109	4,775	-7.8	61.2	19.9
Total	576,270	580,168	50,857	57,508	-0.7	2.7	14.5
MUSKOGEE AREA							
Food	133,762	140,465	11,088	10,744	-4.8	2.6	10.9
Apparel	19,774	19,225	1,761	2,736	2.9	-2.2	64.4
General Merchandise	42,871	41,661	4,189	7,099	2.9	11.9	92.5
Furniture	14,036	14,865	1,049	1,282	-5.6	-2.2	27.7
Lumber	5,023	6,073	334	287	-17.3	-1.5	-8.0
Auto Dealers	74,718	87,103	5,939	5,606	-14.2	11.9	-2.4
Service Stations	13,254	13,674	995	975	-3.1	-16.3	-16.7
All Other	36,438	34,763	3,485	4,542	4.8	16.6	49.0
Total	339,876	357,829	28,840	33,271	-5.0	5.8	26.4
STATE							
Durable Goods[a]	5,577,368	6,378,409	442,017	444,847	-12.6	5.3	2.0
Auto Dealers	3,880,472	4,523,312	308,358	291,159	-14.2	11.9	-2.4
Accessory Dealers	327,590	338,581	26,252	27,246	-3.2	-1.3	9.0
Total Automotive	4,208,062	4,861,893	334,610	318,405	-13.4	10.7	-1.5
Furniture	250,579	268,710	20,322	23,317	-6.7	-4.2	6.1
Household Appliances	229,118	236,227	19,548	23,411	-3.0	0.8	23.0
Total Furniture and Appliances	479,697	504,937	39,870	46,728	-5.0	-1.8	14.0
Lumber and Building Materials	559,651	631,257	47,605	37,686	-11.3	2.9	-14.6
Hardware Stores	63,188	63,743	5,498	6,049	-0.9	9.5	32.1
Total Lumber, Building Materials & Hardware	622,839	695,000	53,103	43,735	-10.4	3.5	-10.2
Nondurable Goods[a]	10,028,103	11,032,443	763,301	942,488	-9.1	-5.4	19.2
Apparel	619,776	630,437	49,393	82,338	-1.7	-2.7	55.5
Drug Stores	537,993	498,698	41,074	53,649	7.9	-6.3	23.3
Eating and Drinking Places	1,862,482	1,874,283	145,920	137,405	-0.6	-2.6	-1.9
Food Group	3,705,905	4,685,807	256,026	269,924	-20.9	-7.3	3.6
Service Stations	674,703	695,107	50,468	49,704	-2.9	-16.9	-16.6
General Merchandise Group	1,896,513	1,910,299	157,660	281,261	-0.7	-1.8	54.6
Total Retail Trade	15,605,471	17,410,852	1,205,318	1,387,335	-10.4	-1.7	13.1

[a]Includes data for categories not shown in the table.

RETAIL TRADE IN SELECTED CITIES
($000)

Retail Trade	12 Mos. '87 Adjusted	12 Mos. '86 Adjusted	Dec. '87 Adjusted	Dec. '87 Unadjusted	Percentage Change 12 Mos. '87/'86 Adjusted	Percentage Change Dec./Nov. '87 Adjusted	Percentage Change Dec./Nov. '87 Unadjusted
Ada	159,190	169,748	12,852	15,350	-6.2	0.1	22.8
Altus	141,446	157,259	11,260	13,204	-10.1	2.8	19.0
Alva	43,216	46,277	3,271	3,838	-6.6	-6.1	10.8
Anadarko	54,479	62,495	4,543	5,226	-12.8	-1.6	18.0
Ardmore	216,736	229,836	18,691	22,289	-5.7	7.2	29.5
Bartlesville	220,177	234,965	17,417	21,357	-6.3	-4.3	15.2
Blackwell	34,897	39,845	2,845	3,308	-12.4	3.4	17.9
Broken Arrow	208,851	224,082	18,062	19,454	-6.8	-0.8	7.8
Chickasha	103,803	112,160	8,456	9,770	-7.5	-0.8	14.7
Clinton	69,847	76,393	5,628	6,108	-8.6	-0.0	8.2
Cushing	62,207	70,310	5,228	6,116	-11.5	-0.2	19.4
Del City	129,525	119,206	10,287	10,241	8.7	1.9	6.1
Duncan	155,374	170,373	13,184	15,189	-8.8	0.1	11.4
Durant	117,265	118,192	9,480	11,381	-0.8	7.4	33.5
Edmond	254,095	294,445	17,536	19,421	-13.7	-28.1	-18.7
Elk City	83,316	92,636	6,819	7,729	-10.1	-2.8	11.2
El Reno	85,992	95,476	6,710	7,416	-9.9	-2.2	3.0
Guthrie	58,392	65,224	4,657	4,928	-10.5	-12.1	-8.5
Guymon	50,097	56,206	3,608	4,386	-10.9	-12.0	8.7
Henryetta	42,065	58,814	2,809	3,178	-28.5	-7.7	6.2
Hobart	26,149	29,331	2,013	2,234	-10.8	2.0	9.6
Holdenville	30,643	34,178	2,427	2,787	-10.3	5.9	16.2
Hugo	31,181	34,435	2,645	3,040	-9.4	12.5	34.3
Idabel	43,145	48,270	3,398	3,833	-10.6	-5.4	4.5
Lawton	548,071	545,807	47,918	55,070	0.4	0.2	14.9
McAlester	110,950	120,771	9,199	10,688	-8.1	8.9	25.0
Miami	128,705	140,510	9,880	12,138	-8.4	-6.8	15.8
Midwest City	393,166	424,997	33,206	38,362	-7.5	2.3	13.2
Moore	157,677	159,159	13,607	15,165	-0.9	3.7	13.7
Muskogee	324,946	337,803	27,567	31,971	-3.8	7.8	26.7
Norman	667,681	736,236	53,896	60,589	-9.3	-1.0	11.0
Oklahoma City	3,128,151	3,256,400	271,818	327,350	-3.9	2.7	20.6
Okmulgee	59,822	66,996	4,598	5,109	-10.7	-5.1	3.7
Pauls Valley	44,944	48,432	3,456	4,017	-7.2	-20.0	-4.9
Pawhuska	18,464	21,835	1,305	1,549	-15.4	-29.0	-12.2
Ponca City	179,126	184,678	14,754	17,870	-3.0	-0.2	20.7
Poteau	49,733	54,903	4,022	4,669	-9.4	2.0	12.1
Sand Springs	97,035	99,953	8,860	9,689	-2.9	3.6	16.7
Sapulpa	141,449	155,678	11,520	13,040	-9.1	3.2	16.0
Seminole	65,166	74,038	4,792	5,653	-12.0	-5.0	7.8
Shawnee	276,587	284,455	23,381	26,448	-2.8	-2.1	9.6
Stillwater	272,888	267,704	23,469	26,060	1.9	3.4	16.3
Tahlequah	87,776	90,217	7,038	7,490	-2.7	-1.5	6.7
Tulsa	2,729,005	2,913,405	232,059	273,679	-6.3	2.9	21.5
Watonga	20,149	21,745	1,527	1,784	-7.3	-14.1	-1.8
Weatherford	60,076	67,791	4,685	5,460	-11.4	1.0	14.8
Wewoka	12,889	14,220	945	1,014	-9.4	-3.1	3.9
Woodward	124,760	137,340	9,852	11,374	-9.2	-4.8	7.4
Total Selected Cities	12,121,304	12,865,229	1,017,180	1,188,021	-5.8	0.8	16.8

ENID AND LAWTON MSAs

Category	12 Mos. '87	12 Mos. '86	Dec. '87	Percentage Change 12 Mos. '87/'86	Percentage Change Dec./Nov. '87
ENID MSA					
Employment (Number)[a]					
Labor Force	30,400	31,200	30,225	-2.6	0.8
Total Employment	28,300	28,725	28,600	-1.5	1.1
Unemployment Rate (%)	6.9	7.9	5.4	—	—
Industrial Power Sales (000 Kwh)	458,055	463,044	36,766	-1.1	-9.0
PERMIT-AUTHORIZED CONSTRUCTION[a]					
Residential—Single Family					
Dollar Value ($000)	2,233	1,710	312	30.6	60.0
Number of Units	22	23	2	-4.3	0.0
Residential—Multi Family					
Dollar Value ($000)	0	6,000	0	—	0.0
Number of Units	0	124	0	—	0.0
Nonresidential					
Commercial ($000)	492	995	5	-50.6	-77.5
Industrial ($000)	1,194	1,587	0	-24.8	0.0
Institutional ($000)	2,052	0	0	—	0.0
Nonbuilding					
Streets and Highways ($000)	264	2,958	0	-91.1	0.0
All Other Nonbuilding ($000)	336	9	6	E	-51.7
Total Construction ($000)	6,571	13,259	323	-50.4	40.8
LAWTON MSA					
Employment (Number)[a]					
Labor Force	49,775	48,425	50,200	2.8	1.3
Total Employment	47,325	46,050	47,950	2.8	1.5
Unemployment Rate (%)	4.9	5.0	4.5	—	—
Industrial Power Sales (000 Kwh)	196,066	187,473	15,752	4.6	0.9
PERMIT-AUTHORIZED CONSTRUCTION[a]					
Residential—Single Family					
Dollar Value ($000)	17,942	21,553	629	-16.8	-30.9
Number of Units	276	344	10	-19.8	-16.7
Residential—Multi Family					
Dollar Value ($000)	740	2,119	340	-65.1	—
Number of Units	40	78	24	-48.7	—
Nonresidential					
Commercial ($000)	3,913	5,601	300	-30.1	171.5
Industrial ($000)	320	1,232	0	-74.0	—
Institutional ($000)	1,400	1,638	0	-14.5	0.0
Nonbuilding					
Streets and Highways ($000)	817	8,525	0	-90.4	—
All Other Nonbuilding ($000)	0	17	0	—	0.0
Total Construction ($000)	25,133	40,684	1,269	-38.2	-11.0

[a]Includes revisions.
E = exceeds 600 percent.

MUSKOGEE MA

Category	12 Mos. '87	12 Mos. '86	Dec. '87	Percentage Change 12 Mos. '87/'86	Percentage Change Dec./Nov. '87
Employment (Number)[a]					
Labor Force	32,875	33,000	33,050	-0.4	1.1
Total Employment	30,025	30,000	30,275	0.1	1.3
Unemployment Rate (%)	8.7	9.1	8.4	—	—
Industrial Power Sales (000 Kwh)	190,701	167,362	13,705	13.9	-9.7
PERMIT-AUTHORIZED CONSTRUCTION[a]					
Residential—Single Family					
Dollar Value ($000)	4,992	2,381	0	106.7	0.0
Number of Units	66	49	0	34.7	0.0
Residential—Multi Family					
Dollar Value ($000)	1,427	3,017	0	-52.7	0.0
Number of Units	35	88	0	-60.2	0.0
Nonresidential					
Commercial ($000)	8,369	328	0	E	0.0
Industrial ($000)	2,465	532	0	363.3	0.0
Institutional ($000)	1,523	1,629	0	-6.5	0.0
Nonbuilding					
Streets and Highways ($000)	448	894	0	-49.9	—
All Other Nonbuilding ($000)	14	25	0	-44.8	0.0
Total Construction ($000)	19,167	8,805	0	117.7	—

[a]Includes revisions.
E = Exceeds 600 percent.

TULSA MSA

Category	12 Mos. '87	12 Mos. '86	Dec. '87	Percentage Change 12 Mos. '87/'86	Percentage Change Dec./Nov. '87
Employment (Number)[a]					
Labor Force	348,200	357,900	342,500	-2.7	-0.2
Total Employment	319,500	327,600	318,900	-2.5	0.4
Manufacturing	49,775	51,200	50,300	-2.8	1.7
Mining	17,108	17,725	17,300	-3.5	0.0
Government	35,933	36,900	36,300	-2.6	0.2
Wholesale and Retail Trade	73,808	72,900	75,100	1.2	1.2
Unemployment Rate (%)	8.2	8.4	6.9	—	—
Average Weekly Earnings					
Manufacturing ($ Per Worker)	439.07	417.50	463.97	5.2	1.9
Industrial Power Sales (000 Kwh)	2,099,207	1,987,599	172,691	5.6	-3.9
Mortgage Loans Closed ($000,000)[b]	NA	NA	NA	—	—
Bank Deposits ($000,000)[c]					
Demand Deposits	853	712	897	19.4	7.2
Time and Savings Deposits	2,290	2,032	2,197	12.7	0.5
Air Transportation					
Passengers Enplaning (Number)	1,397,864	1,374,788	111,460	1.7	2.4
Passengers Deplaning (Number)	1,414,525	1,377,601	107,518	2.7	-1.7
Freight (Tons)	16,391	10,056	1,632	63.0	25.3
Water Transportation					
Tulsa Port of Catoosa					
Tons In	537,318	470,027	50,754	14.3	11.2
Tons Out	1,274,220	941,611	130,059	35.3	8.3
PERMIT-AUTHORIZED CONSTRUCTION[a]					
Residential—Single Family					
Dollar Value ($000)	120,293	113,215	5,482	6.3	-40.0
Number of Units	1,721	1,798	78	-4.3	-37.1
Residential—Multi Family					
Dollar Value ($000)	11,356	32,555	74	-65.1	—
Number of Units	528	878	2	-39.9	—
Nonresidential					
Commercial ($000)	26,516	50,328	6,043	-47.3	227.7
Industrial ($000)	12,084	14,623	0	-17.4	—
Institutional ($000)	16,533	24,726	429	-33.1	-89.4
Nonbuilding					
Streets and Highways ($000)	30,888	18,953	0	63.0	—
All Other Nonbuilding ($000)	3,996	5,795	130	-31.0	-33.5
Total Construction	221,665	260,195	12,158	-14.8	-47.2
General Business Index	87.3	85.7	87.9	1.8	1.0

Note: Wage and salary employment data preliminary.
[a]Includes revisions.
[b]By Savings and Loan Associations.
[c]Deposits of large commercial banks.
NA = Not Available.

OKLAHOMA CITY MSA

Category	12 Mos. '87	12 Mos. '86	Dec. '87	Percentage Change 12 Mos. '87/'86	Percentage Change Dec./Nov. '87
Employment (Number)[a]					
Labor Force	508,900	517,200	504,000	-1.6	0.0
Total Employment	478,400	482,300	479,100	-0.8	0.4
Manufacturing	48,617	50,000	48,300	-2.8	-0.4
Mining	11,717	13,300	11,800	-11.9	1.7
Government	96,625	98,100	97,300	-1.5	0.0
Wholesale and Retail Trade	97,608	103,700	98,800	-5.9	0.5
Unemployment Rate (%)	6.0	6.7	4.9	—	—
Average Weekly Earnings					
Manufacturing ($ Per Worker)	450.09	437.66	475.27	2.8	3.7
Industrial Power Sales (000 Kwh)	1,231,399	1,226,661	92,705	0.4	-11.2
Mortgage Loans Closed ($000,000)[b]	NA	NA	NA	—	—
Bank Deposits ($000,000)[c]					
Demand Deposits	909	924	881	-1.7	2.3
Time and Savings Deposits	1,579	2,114	1,188	-25.3	-1.1
Air Transportation					
Passengers Enplaning (Number)	1,509,872	1,475,115	121,918	2.4	3.0
Passengers Deplaning (Number)	1,515,834	1,487,639	113,851	1.9	-3.9
Freight Enplaned (Tons)	6,498	7,189	690	-9.6	22.1
Freight Deplaned (Tons)	10,366	10,789	951	-3.2	2.0
PERMIT-AUTHORIZED CONSTRUCTION[a]					
Residential—Single Family					
Dollar Value ($000)	144,549	180,693	4,733	-20.0	-28.0
Number of Units	2,281	2,985	70	-23.6	-38.6
Residential—Multi Family					
Dollar Value ($000)	5,438	28,202	430	-80.7	—
Number of Units	171	975	21	-82.5	—
Nonresidential					
Commercial ($000)	119,340	66,204	2,490	80.3	-69.0
Industrial ($000)	3,345	5,705	0	-41.4	—
Institutional ($000)	19,027	9,222	230	106.3	-79.5
Nonbuilding					
Streets and Highways ($000)	48,318	48,463	70	-0.3	-59.1
All Other Nonbuilding ($000)	4,060	3,255	41	24.7	-58.8
Total Construction ($000)	344,076	341,744	7,993	0.7	-50.6
General Business Index	89.6	84.4	92.0	6.2	-0.2

Note: Wage and salary employment data preliminary.
[a]Includes revisions.
[b]By Savings and Loan Associations.
[c]Deposits of large commercial banks.
NA = Not Available.

Sources for all tables: Local utilities companies; 10th Federal Reserve District Member Banks; Federal Home Loan Bank of Topeka; Oklahoma Employment Security Commission; United States Department of Commerce, Construction Statistics Division; Oklahoma Department of Transportation, *Progressive Report of the Transportation Director*; Center for Economic and Management Research, College of Business Administration, The University of Oklahoma. The data for all tables were compiled by Marjorie E. Earley, Statistician for CEMR and Brian Hickey, Research Assistant.

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Business Highlights

Neil J. Dikeman, Jr.

The forecasts of economic activity in Oklahoma presented at this time last year were somewhat optimistic in view of the actual performance of the economy during the year. For example, where retail sales were expected to increase slightly due to a strong performance by the non-durable lines which would off-set a decline in sales of durable goods, non-durable goods sales experienced a very poor year and enforced the decline in durable goods sales. Next, the gains that were expected in manufacturing and construction employment during the latter half of the year did not emerge thus leaving employment marginally below that of the previous year. Last year's forecast of a decline of from 5 to 7 percent from 1986 levels in construction, however, was nearly perfect as was the forecast of deposits in depository institutions throughout the State. Conversely, both the energy output and personal income forecasts were overly optimistic while the forecast of the General Business Index was somewhat pessimistic.

The actual performances of the major economic sectors during 1987 indicate that recovery of the State's economy is still sometime away. The failure of employment to increase and the unexpected sharp drop in retail sales are only two of the problem areas which face the State at this time. There are, however, several indicators which lend some limited optimism to the outlook for 1988.

Personal Income

Personal income when stated in current dollars rose by 1.7 percent during the year to $41.4 billion which, on the surface, appears to be a rather significant gain. However, the increase failed to match the increase in the rate of inflation for the second successive year thus leaving the value of real personal income nearly 2 percent below that of 1986 and at about the same level as 1983.

The failure of personal income to rise as rapidly as the rate of inflation during 1988 can be attributed to the fact that wages and salaries experienced only a marginal increase which was largely offset by decreases in property and proprietors income. Therefore, the modest gain in personal income was attributable for the most part to an increase in transfer payments.

Retail Trade During 1987

Retail sales in Oklahoma during December rose by 13.1 percent which, after adjustment for seasonal variations, was 1.7 percent less than seasonally expected for December. This less than seasonal rise coupled with seasonally adjusted declines in sales during six of the eleven previous months of the year resulted in a 10.4 percent decrease during 1987 from the 1986 total which was the sharpest drop in this important indicator in the past twenty years and only the second annual decrease since 1970.

The less than seasonal December increase in total sales over November levels was primarily due to unexpectedly small increases in all non-durable goods lines and in furniture and auto accessory sales among the durable goods lines. The picture might have been worse however, had not the declines in automobile and lumber and building material sales been far less than was expected thereby resulting in seasonally adjusted increases over November.

Sales of all merchandise lines, except drug stores, declined during 1987 with the largest losses occurring in sales of food — off nearly 21 percent; automobile dealerships — down by more than 14 percent; lumber and building material stores — down by more than 11 percent and other durable goods sales which declined nearly 16 percent. Losses experienced by the remaining merchandise lines ranged from less than 1 percent for general merchandise, hardware stores and restaurants to 6.7 percent for furniture dealers with the gain of 7.9 percent in sales of drug stores being the only increase noted during the year. The unusually large decline in

sales of food in areas outside the metropolitan districts — according to retailers — was the decline in the size of the market coupled with a growing trend in the purchase of lower priced food products by the consumer.

One question which arises relates to the areas of the State which suffered most from the slump in sales. In this respect, the MSAs fared less badly than did the remainder of the State as is witnessed by the fact that total sales in the five large areas decreased by 4.9 percent during the year. These losses ranged from one of less than 1 percent in Lawton to one of 5.9 percent in Tulsa. Next, the larger cities and towns outside the five metropolitan areas experienced a total decline in sales from 1986 levels of 8.2 percent. The changes in sales during 1987 in this group of communities ranged from an increase of 1.9 percent in Stillwater to a decrease of 28.5 percent in Henryetta. This suggests then that, in order for the State's sales volume to decline by 10.4 percent, sales in the remainder of the State must have decreased radically. Further analyses of the data reveals that, indeed sales of retail establishments located in the urban and rural areas outside the five MSAs and the 31 cities and towns which are reported separately in this publication declined by 34.9 percent in 1987 from the volumes reported in 1986.

Employment

The average monthly labor force declined by 29 thousand persons during 1987 while average monthly employment was off the 1986 average by 13 thousand jobs. As a result and despite the decline in employment, the average unemployment rate for the year dropped to 7.4 percent to reverse the increase noted in this indicator between 1985 and 1986.

The decline in employment during the year was due to a 9.4 percent drop in agriculture employment which was tempered somewhat by a fractional decrease in nonagricultural jobs. Among the nonagricultural segments, the largest losses occurred in mining employment (down 2.9 percent), manufacturing (down 2.5 percent), retail trade (down 1.6 percent) and contract construction (off by 1.2 percent). Since the mining, manufacturing and construction industries have the highest wage scales among the various sectors, the decreases experienced by them had a very damaging effect on wage and salary incomes. The only increases noted in average monthly employment were one of 1.2 percent in the service trades and one of only 0.1 percent in government.

Construction Activity in 1987

The dollar volume of construction activity in Oklahoma dropped again in 1987 to mark the fourth successive annual decline in construction activity. However, this most recent annual decrease provided some optimism since it represented the smallest drop of the last four years. Essentially, the 1987 decline was attributable to a 70 percent drop in the construction of multi-family dwellings coupled with decreases of 44.1 percent in industrial building; 19.8 percent in non-building construction; 14.9 percent in institutional building and 9.8 percent in single family dwellings. Fortunately, much of the impact of these losses was off-set by increases of 18 percent and 14.4 percent in commercial building and street and highway construction respectively.

It should be noted that the increase in commercial construction during 1987 reversed the downward pattern of the two previous years while that of street and highway construction was the second successive gain experienced by this type of construction activity. Conversely, the decline in industrial building during the year was the second successive drop and institutional building activity was off the previous year's total for the fifth consecutive year. The housing decreases marked the fourth straight drop in terms of the dollar volume of construction activity.

Banking and Finance

Deposits in Oklahoma financial institutions declined for the second successive year but the rate of decrease was only 2.4 percent which was considerably less than the 3.8 percent drop suffered in 1986. Unlike 1986, the 1987 decrease was due entirely to a 3.6 percent loss in savings account balances while demand account balances rose by 1.8 percent during the year thereby raising them to near the 1985 level.

Contacts with the depository institutions indicate that a major cause for the decline in savings deposits was the reinvestment of funds in instruments offering higher interest rates. Another, but less important cause for this reduction was the decline in employment throughout the State and its negative impact on wage and salary income.

The condition of thrift institutions presented an even more pessimistic picture in that the assets of these institutions declined by 0.2 percent to mark the first downturn in this indicator in at least twenty years. The decline in these assets was accompanied by a decrease of 35.5 percent in mortgage loans closed which more than reversed the increase noted at the end of 1986.

Manufacturing

Manufacturing activity during 1987, as measured by manufacturing employment decreased for the second successive year. This decrease reduced the average monthly level of manufacturing employment in the State by more than 4 thousand jobs or 2.5 percent which was the slowest rate of decline in the past six years. Further evidence of the slowdown in manufacturing activity is the fact that the average number of hours worked each week during 1987 dropped by 0.3 percent to 41.2 hours — a reversal of the increase noted during 1986.

Energy

The energy sector of the State's economy continued to present a very pessimistic picture during 1987 as crude oil production dropped to slightly more than 132 million barrels — the lowest output since well before 1950. It is somewhat surprising to note that this decline in crude oil production occurred during a period in which the average price rose from $14.05 per barrel in 1986 to $17.72 per barrel in 1987 when it was expected that a price increase of this magnitude would at least hold production at the 1986 level.

Natural and casinghead gas

production during 1987 experienced a slight increase of 3.3 percent to a total of more than 1.99 trillion cubic feet which represented a reversal from the decrease noted in 1986. This increase in output came at a time when the average price of gas declined about 26 cents per thousand cubic feet to bring the average monthly price well below the 1980 level. The increase was attributable to the relatively harsh weather experienced by the State during the latter portions of the fourth quarter of the year.

Oklahoma General Business Index

Despite the relatively poor showing by the major indicators discussed earlier in this article, other factors such as the decline in the number of bankruptcies and the apparent optimism on the part of business leaders who have survived the problems of the past four years, the General Business Index for the State rose to 94.1 during the year. This increase of 3.3 percent raised the Index to its highest level since 1984.

The Outlook

The disappointing decreases which occurred during 1987, when some evidence of recovery was expected, creates some hesitancy in estimating the changes which will occur in Oklahoma's economic conditions during 1988. Already three banks have closed during the early part of the year and more are expected to close as the year progresses. On the other hand, several national firms have announced their intentions to open new facilities in the State which will provide job opportunities for several thousand persons. This suggests that the economy will present a mixed picture during the early part of the year at least but could exhibit some strength during the latter two quarters.

Retail Trade

The Conference Board reports that consumer confidence in the economy throughout the nation is slowly regaining the loss in confidence of the economy experienced by consumers following the sharp October downturn in the World's stock markets. This renewed confidence has resulted in increases in plans to buy such big-ticket items as appliances, automobiles and homes within the next six months which suggests that decreases in sales of durable goods noted during the latter half of 1987 should be reversed during the first half of 1988. Moreover, the Conference Board found that, even though the confidence of consumers in the West South Central States (which includes Oklahoma) was the lowest of any region in the country, it too, had experienced some improvement to the extent that an increased number of consumers in this area expected to increase their discretionary purchases. If this optimism holds or increases, Oklahoma retailers of big ticket items such as automobiles, appliances, and home furnishings can expect significant increases in sales during at least the first half of 1988 which is expected to reverse the 1987 downturn in sales of durable goods and result in sales gains of up to 5 percent in this merchandise group.

The sales of non-durable goods lines, conversely, are problematical and depend in large degree to the changes which occur in the population and income of the State. It appears now that the outmigration of Oklahomans to other areas which has occurred since 1984 has nearly run its course and that the number of residents will begin to edge up during 1988. In the event that the State does begin to experience a meaningful reversal of the outmigration trend, food, restaurant, apparel, service station and general merchandise sales can be expected to stabilize and even turn upward and sales of drug stores should continue the upward pattern of the past several years. This would mean that total sales of nondurable goods would at least remain unchanged and could show an increase of about two to four percent. Combining this potential change with that of durable goods sales would result in an increase in retail sales during 1988 of between 2.5 and 4.5 percent over the 1987 total.

Employment

Non-agriculture employment, which declined slightly in 1987 after remaining relatively stable during 1986, should experience a modest increase in 1988. This increase is expected to come about through slight gains in retail and wholesale trade, services and construction with little or no changes occurring in manufacturing, mining and government. Agriculture employment, on the other hand, is problematical in view of the sharp drop which was noted in 1987. If a similar decline in employment occurs in this sector of the economy, it could cause total employment to be down slightly. However, if the number of jobs in agriculture remain stable or at least declines only slightly, total employment could increase by as much as 2 percent thus bringing average monthly total employment for the year to 1,470,000 jobs which will be slightly higher than in 1986. If agriculture employment experiences a decline of as much as 9 percent, as was the case in 1987, total employment could experience a decline of approximately 1 percent in the average monthly employment level.

Construction Activity

As noted earlier, it appears that the lags noted in construction activity during the past four years may be nearing an end although some elements may continue to drop during 1988. First, recent announcement of new plants and plant expansions should at least halt the drop in industrial building activity and, if the plant additions and expansions occur, might even raise the volume from 10 percent to 15 percent. In a like manner, street and highway building expenditures can be expected to increase significantly in light of the new construction planned in the Oklahoma City area and the expenditures which will be required to repair the damages to streets and highways caused by the winter's ice and snow storms. The best estimates at this time are for street and highway construction expenditures during 1988 to show an increase of from 10 to 15 percent over the 1987 level. Commercial construction will probably not show any increase during 1988 unless residential building picks up rapidly which is not expected to happen within the next

twelve months. This coupled with the continuing high vacancy rates in office buildings suggests that commercial construction could decline by as much as 15 percent from last year's total.

Institutional building activity is expected to consist primarily of additions to existing structures and completion of buildings now underway which will mean that any change that occurs in this construction element will probably be downward and could be as much as a 10 percent drop from the very low 1987 total.

Housing construction — particularly in single family dwellings — offers some hope of increase. This optimism stems from two factors the first of which is the Conference Board's estimate that about 5 percent of the household population plans to purchase housing within the next six months. However, at least 40 percent of those planning to purchase homes are expecting to buy used or older housing while 30 percent will seek new housing. The remaining 30 percent are uncertain as to the age of the housing they will buy and will probably shop for housing based on price and their abilities to pay. These data indicate that the bulk of the demand for housing will be for used housing which in itself will help the building industry by reducing the surplus housing now on the market thereby increasing the incentives to build replacement dwellings. The second factor which lends optimism to the near future of residential construction is the possibility of meaningful increases in population that will need housing. Any increases of this sort will not only further reduce surpluses of single family dwellings but will also cut the relatively high apartment vacancy rates. The feeling now is that construction of single family dwellings during 1988 will increase between 3 and 4 percent but that little or no change will be noted in the construction of multi-family dwellings.

The above forecasts suggest that construction activity has every opportunity of reversing the downward pattern of recent years and could show a gain of as much as 5 percent by year's end. However, this increase, if it occurs, will depend heavily on projected increases in street and highway, industrial, and single family dwelling construction.

Banking and Finance

The fact that deposits in all depository institutions in the State followed the 3.8 percent drop of 1986 with one of 2.4 percent in 1987 indicates that the rate of outflow of these deposits to other types of relatively liquid investments is beginning to abate. However, since the rates of interest paid by regulated depositories remains well below that paid by such other monetary functions as mutual funds, and other investments, it is not likely that the deposit outflows from regulated depositories will cease in the near future. This suggests that, during 1988, deposits in all regulated depositories in the State will continue the downward pattern of the past two years and will be between 1 and 2 percent below the 1987 total.

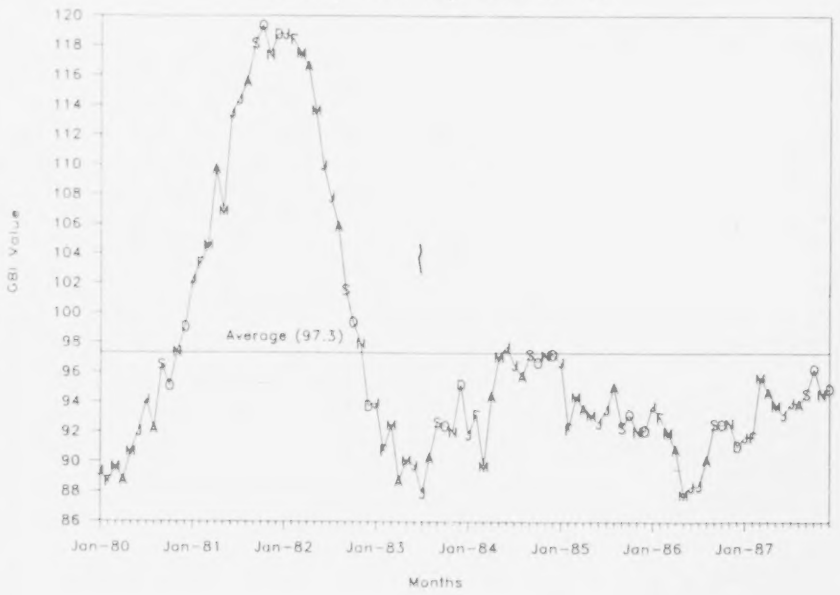
Energy

The outlook for energy in 1988 presents a mixed picture in that the output of natural and casinghead gas is expected to continue the upward movement of 1987 by rising between 1 and 2 percent with prices remaining at or slightly above the present price of $1.45 per thousand cubic feet. Conversely, crude oil production will continue to decline, although not as rapidly as has been the case during the past two years. Currently, it appears that crude oil output—assuming that only minimal or no changes in the average price of oil will occur — will fall by between 3 and 4 percent thus bringing the total to between 126 and 128 million barrels.

Personal Income

The mixed outlook for the various economic sectors suggests that personal income in terms of current dollars will show a modest increase of about 3 percent during 1988 to bring the total for the year to between $42

Oklahoma State General Business Index
January 1980 through December 1987



and $43 billion. However, at its current rate of increase, it appears that the rate of inflation will exceed that of personal income by about 2 percent which will mean that the purchasing power provided by personal income will be about 1 percent below that of 1987.

Oklahoma General Business Index

The trend in this index prior to 1987 has been downward but this pattern appears to have been reversed in 1987 by the 3.3 percent increase noted during that year. Given the relative improvements projected for various sectors of the economy in 1988 which declined in 1987, the General Business Index should rise by about 4 percent to an average of about 98 percent.

Neil J. Dikeman, Jr. is Associate Director for the Center for Economic and Management Research.

A Primer on What's Wrong with U.S. Saving and Investment 1980-86

Larkin Warner

Recent instability in financial markets has riveted the business community's attention to macroeconomic performance and to public policy affecting the macroeconomy. Discussion often focuses on the "twin deficits" in the federal budget and the balance of international trade.

How are the twin deficits linked, and how serious are the macroeconomic problems which they generate? How are all these problems bound together in the structure of saving and investment?

One of the best ways to understand the new macroeconomic environment is to focus on two simple accounting identities: (1) at the end of any year, a nation's *gross investment* equals its *sources of saving* and (2) gross investment minus depreciation equals *net investment* which is, by definition, the annual addition to a nation's accumulated stock of capital.

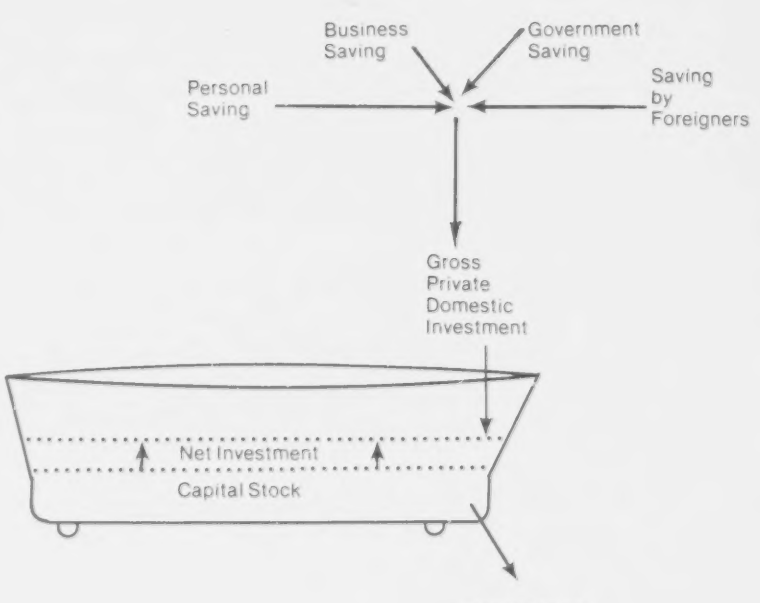
The "Bathtub Theorem" (see Figure 1) helps visualize how these accounting identities work out.[1] Because concepts from the U.S. national income accounts are being used, it is important to define the terms "saving," "investment," and "capital stock" in order to understand how the macroeconomic bathtub works.

- Saving occurs whenever any sector of the economy spends less on the flow of current production (Gross National Production or GNP) than it could finance with current income; saving can be positive or negative (dissaving).

- Personal saving is performed by the household sector; business saving is essentially retained earnings; government saving (both federal and state/local) is the difference between tax and other revenue receipts and outlays; and, on a net basis saving may flow out of the U.S. as we acquire assets abroad, or foreign saving may flow into the U.S.

FIGURE 1

The Bathtub Theorem



- Investment refers to the purchase by business of currently produced plant, equipment, and inventory. Investment may be gross (Gross Private Domestic Investment) or net after depreciation.
- Capital (the capital stock) is the total accumulation of all plant, equipment, and inventory that has ever been produced in the past less depreciation. When capital is accumulated as a result of investment, the nation's productive capacity is enhanced. This enhanced productivity provides rewards to savers in the form of interest, profit, and rents. In the U.S., on average, three dollars worth of capital stock generates an output flow of one dollar per year.

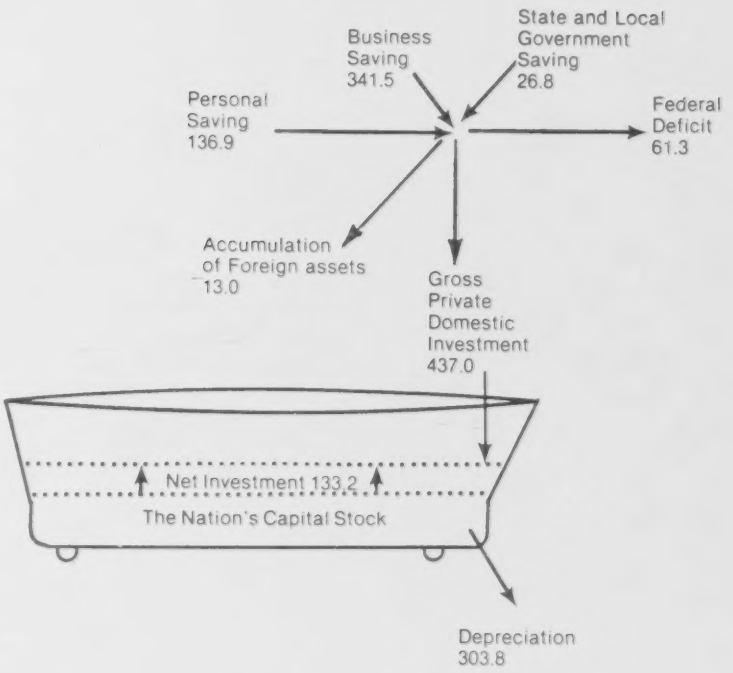
The operation of the bathtub is now fairly obvious. The sum of the flows of saving (i.e. not using current production) are identical to gross investment. When gross investment (the inflow) exceeds depreciation (flowing out the drain) net investment is positive and the capital stock (water in the tub) rises. Since World War II, U.S. net investment has always been positive.

Now that this part of the nation's macroeconomic plumbing system has been mastered, the dramatic changes in the structure of our economy which have occurred since 1980 are now understandable. This is demonstrated in Figures 2 and 3 with more bathtubs—a 1980 model and a 1986 model. (A 1987 model would look very much like the 1986 model, though the federal deficit flow will be somewhat smaller.)

The main part of the tub and its contents look about the same in each of the years when viewed relative to the flow of total output (GNP). In both years, gross investment was about 16 percent, and net investment about 5 percent of GNP. These percentages hold for the entire period 1980-1986, except for a drop in the investment share in 1982 due to a recession.[2] Politicians love to tout the performance of the U.S. macroeconomy during the 1980s—12 million new jobs since 1982, the longest sustained expansion in modern history, and so forth. Most of these assertions are true and are due almost entirely to the fact that economic growth has been sustained by a steady flow of gross and net investment, and thus by a steady expansion of the nation's productive capacity.

FIGURE 2

The 1980 Model
(amounts in billions of dollars)



Reference: GNP = $2,732.00

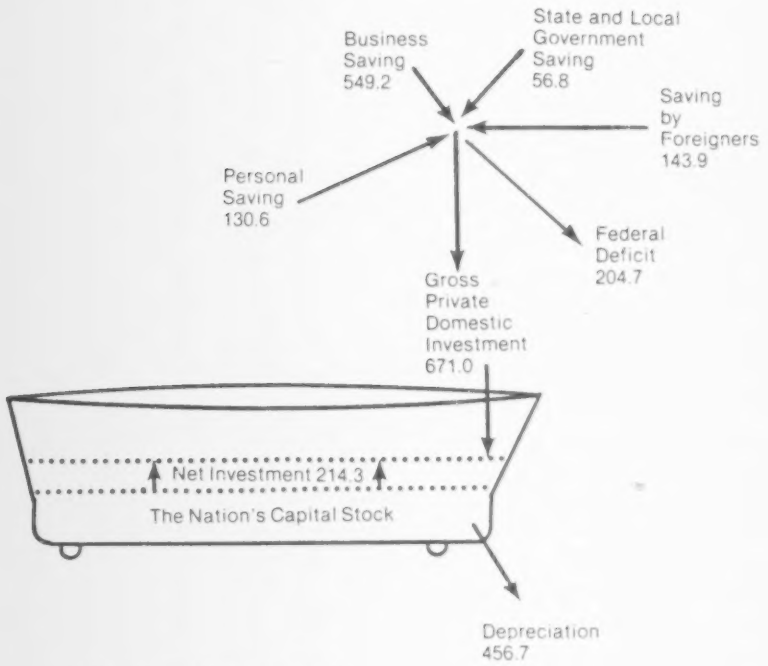
(Statistical discrepancy: 6.1)

The big difference between the 1980 and 1986 models is found in the saving pipes.

- Although GNP grew 55 percent between 1980 and 1986, personal saving by households actually *fell* 4.6 percent! The Yuppies are not saving like their parents.
- Business saving (retained earnings) held up quite well, as has the saving behavior of state and local governments while they fund giant employee retirement programs.
- Dissaving by the federal government skyrocketed from $61.3 billion in 1980 to $204.7 billion in 1986. A program of major tax cuts put in place in 1981 was not matched by expenditure cuts.
- The only way the U.S. maintained its level of investment spending and its prosperity was by shifting in a big way to reliance on the saving of foreigners. In 1980, the U.S. was actually a net supplier of saving abroad; by 1986, we were relying on other nations to provide $143.9 billion of saving—about one-fifth of our gross investment.
- The dollars that other nations need in order to translate their saving into U.S. assets come from a variety of sources including the trade deficit,

FIGURE 3

The 1986 Model
(amounts in billions of dollars)



Reference: GNP = $4,235.0

(Statistical discrepancy: 4.8)

Eurodollars, and central bank intervention in exchange markets. The rapid growth in the trade deficit after 1980 was an important source of dollars used by foreigners to accumulate U.S. assets.

- Note that while a falling dollar in international exchange will stimulate U.S. exports and choke off imports, it may also choke off the flow of foreign saving to the U.S. and therefore reduce U.S. investment spending.[3]
- The big federal deficit has driven real interest rates higher in the United States. This has stimulated foreigners to buy T-bills and other U.S. securities, and thus to help finance both the federal deficit and the trade deficit.

Hopefully, it is now clear that, given the reduced saving by U.S. households and the massive federal deficits, the U.S. could not have maintained investment without the inflow of saving from abroad, i.e., without the willingness of persons and firms outside the U.S. to accumulate real and financial assets within our boundaries. Domestic spending beyond the level of domestic production during the 1980s was financed by foreign saving.

So what is wrong with saving and investment in the United States? Investment has held up well; there is nothing fundamentally wrong with the level of investment. Gross investment has been a steady 16 percent of GNP. Of course, the nation's productivity record could be improved if the share of GNP allocated to plant and equipment were expanded. But 16 percent is not bad. Rather, the problem lies with saving.

Remember that savers must be rewarded for their thrift, and the rewards come from the increased production generated by an ever-expanding capital stock. These rewards—interest, profit, rents—raise the standard of living of people in the U.S. when the saving originates in the U.S. However, the rewards accrue to persons in other nations if *they* are the ones who do the saving. Thus the shift to foreign sources of saving requires a diminution in the future standard of living in the U.S. It would obviously be preferable to fund an adequate level of investment spending with domestic saving; this cannot be done because of the large federal deficit and the current consumption binge of the American household.

Diminution of future U.S. standards of living is not the only result of the 1986 model bathtub. In order to keep the flow of foreign saving arriving on a regular basis, there is a tendency for upward pressure to be placed on interest rates. The depreciation of the dollar enhances that pressure. We all know what higher interest rates can mean for the stock market—to say nothing of the willingness of businesses to undertake new investment projects.

Clearly, the 1980 macroeconomic tub is more consistent with the long term national interest. What can be done to rearrange the flows in the later model tubs? The fundamental answer is simple: cut the federal deficit and stimulate household saving. Federal outlays must be reduced and/or taxes increased. Measures need to be taken to make saving more attractive. Cutting the federal deficit is a political feat that is easier said than done. The 1987 deficit will be smaller than 1986, but will still be large by historical standards. Feasible policies for enhancing household saving are hard to develop. There are now indications that financial market instability will goad the policymakers to take more effective action.

Unfortunately, there is another option for repairing the late model tubs: a recession. A major downturn in U.S. investment spending would, of course, reduce the need to rely on foreign saving.[4]

Either a recession or a retrenchment of the federal budget is likely to make many Americans think they are worse off. And quite a few will be

correct. Moreover, neither outcome is likely to enhance the popularity of politicians in power at the time. Austerity has never been an effective political platform in the United States. *But austerity will come—one way or another.*

Notes

[1]Kenneth Boulding deserves the credit (or blame) for the "bathtub theorem". See his *Principles of Economic Policy* (Englewood Cliffs: Prentice-Hall Inc., 1958), pp. 65-67.

[2]Data are from the national income accounts published in the *Survey of Current Business*, July, 1987, and the 1987 *Economic Report of the President*.

[3]See, for example, Federal Reserve Bank of San Francisco, *FRBSF Weekly Letter*, March 27, 1987.

[4]This same point is made in a recent feature article in the *Wall Street Journal*. See "Surprising Majority Agrees on Need for Weaker Dollar," Nov. 5, 1987, p. 18.

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An Analysis of Senate Bill 434 As a Proposal to Alter the Oklahoma Tax Code

Scott Turner

Introduction

The 1986 Federal Tax Reform Act will generate a very large automatic increase in tax revenue to Oklahoma from the Oklahoma individual income tax. The tax increase is a consequence of the Oklahoma individual income tax code being coupled to the federal income tax code. Senator Branstetter has introduced Senate Bill 434 to rebate a portion of the unexpected tax revenue to Oklahoma taxpayers. This Senate Bill is co-authored by Senators Branch, Choate, Ford, Pierce and Hooper. Representatives Ken Harris, McMillen and Jim Morgan are authors of the Bill in the House.

It is the specific objective of this article to analyze Senate Bill 434 since it is consistent with the 1971 guidelines of the Oklahoma Income Tax Code and it is similar to rebating bills passed by several other states. The broader objective is to develop a methodology that can be applied to other rebating proposals as well as Senate Bill 434.

The methodology developed in this study addresses the question of how a tax rebate is actually distributed between tax returns. For example, the announcement that Senate Bill 434 would rebate $115 million to Oklahoma taxpayers to partially compensate for the automatic tax increase generated by the 1986 Federal Tax Reform Act is not truly informative unless it is known which tax returns will benefit from the rebate. The worst case scenario would be one where the $115 million rebate only reduces the tax liability of tax returns that did not have an automatic tax increase. The best case scenario is a situation where all of the rebate goes to tax returns with an automatic tax increase with no tax return receiving a rebate in excess of the automatic increase.

Automatic Tax Increase Generated by the 1986 Federal Tax Reform Act

Oklahoma Adjusted Gross Income is taken directly from federal Adjusted Gross Income (AGI) and with minor modifications becomes Oklahoma AGI. Itemized deductions in the Oklahoma code are identical to federal itemized deductions. Consequently, increases in federal AGI and decreases in federal itemized deductions produce automatic changes to these items on Oklahoma tax returns.

Changes in the federal tax code included in the 1986 Federal Tax Reform Act that are *not* automatically coupled to the Oklahoma code are increased personal exemptions, increased standard deductions and decreased marginal tax rates. The federal code changes that are *not* automatic in the state code are large enough to completely offset the changes that increase federal tax liability for the majority of federal tax returns. However, at the state level individual income tax liability will increase for most Oklahoma tax returns since all of the automatic changes increase tax liability.

Consequently, the net effect of the 1986 Federal Tax Reform Act is to decrease federal individual income tax liability and to increase Oklahoma individual income tax liability.[1] One study reports that the Oklahoma tax increase is approximately 50 percent as large as the federal tax decrease.[2] These figures are estimates for the time when the features of the 1986 Federal Tax Reform Act are fully phased in.

There are many other states (in addition to Oklahoma) that have their state individual income tax code coupled to the federal code.[3] These states will all have an automatic increase in their tax revenue. The amount of the automatic increase will vary between states since the state codes are not identical. Many states with automatic tax increases have implemented tax policy alternatives that are very similar to Senate Bill 434 to rebate some (or all) of the automatic increase.

The "Efficiency" of a Rebating Procedure

It is not difficult to identify state income tax policy alternatives that would rebate some (or all) of the aggregate automatic increase generated by the 1986 Federal Tax Reform Act to the state taxpayers. However, it is difficult (if not impossible) for a rebating procedure to have an efficiency rating of 100 percent, i.e. a procedure that rebates no more than the amount of the automatic increase for any given tax return. Typically there is over compensation for one group of tax returns and under compensation for another group. The efficiency rating of a rebating alternative simply measures the ratio of the rebate that is allocated to the correct tax returns (in the correct amounts) to the total amount of the rebate. For example, a rebating proposal with a revenue cost of $50,000,000 and an efficiency rating of 80 percent implies that $40,000,000 is "On-Target" and $10,000,000 is "Off-Target" with respect to the original objective of the proposal. While a rebating proposal with a high efficiency rating should compete with other alternatives (e.g. roads, education, health, etc.) for limited state revenue, a rebating proposal with a low efficiency rating should be rejected regardless of its revenue cost.

Oklahoma is a state where it is impossible to implement a "perfect" rebating procedure since the detailed items that changed on the federal tax form, e.g. IRAs, the two earner adjustment, capital gains, consumer interest, etc. do not appear separately on the state form, but are aggregated into AGI and itemized deductions. Consequently, for Oklahoma any rebating procedure will reduce tax liability of some tax returns by more than the amount of the automatic tax increase.

It is the objective of this study to develop a methodology for analyzing Senate Bill 434 as a tax policy alternative to rebate some of the automatic increase for Oklahoma. The methodology estimates the efficiency rating of this bill and could also be applied to other rebating proposals when they are introduced.

Methodology to Analyze Individual Income Tax Rebating Proposals

The effectiveness of a rebating proposal for the Oklahoma individual income tax code could be measured at the tax return level in the following manner. If the proposal decreases tax liability for a given Oklahoma tax return to a level that is still greater than the pre-tax reform tax liability, then the proposal is completely "On-Target" for that tax return. For example, suppose that pre-tax reform tax liability is $500, post-tax reform liability is $750, and tax liability calculated using the proposal is $600 for a given tax return. In this case the cost of the proposal for this return is $750 - $600 = $150. All of $150 is being used for its intended objective to offset part of the increased tax liability generated by federal tax reform. However, consider the situation for a given tax return where tax liability using the proposal is less than pre-tax reform liability. In this situation the proposal reduces tax liability by more than tax reform increased tax liability. For example, suppose for a given tax return that pre-tax reform tax liability is $500, post-tax reform tax liability is $600 and liability using the proposal is $350. In this example the reduction generated by the proposal from $600 to $350 must be divided into two parts. The difference between post-tax reform liability and pre-tax reform liability represents a tax reduction "On-Target" with respect to its intended objective. However, the difference between pre-tax reform liability and liability using the proposal represents a tax reduction that is "Off-Target" from its intended objective. In the example $600 - $500 = $100 is "On-Target" whereas $500 - $350 = $150 is "Off-Target."

The over-all effectiveness of a rebating proposal could be measured using microsimulation. The policy proposal could be simulated on a sample of representative Oklahoma tax returns. Each record in the sample has a weight such that the sum of the sample weights is approximately equal to the number of Oklahoma tax returns. For this set of returns the following calculations are made for each return and the results are then aggregated for all returns in the sample to calculate the effectiveness rating of the proposal.

B = pre-tax reform tax liability (1985 tax year)

A = post-tax reform tax liability (Tax Reform Act fully phased in)

P = tax liability using the tax policy proposal. (e.g. for Senate Bill 434 Oklahoma the personal exemption would be set equal to $2,000, an extra $1,000 exemption would be included for persons over 64 and all features of the 1986 Federal Tax Reform Act would be included in the calculation of federal tax liability).

(It is expected that A>= B and P<= A).

if P>= B then On-Target = A - P.

if P < B then On-Target = A - B and Off-Target = B - P.

Revenue Cost = (On-Target + Off-Target)

The ratio of On-Target to (On-Target + Off-Target) aggregated for all returns in the sample is a measure of the efficiency of the rebating proposal.

Analysis of Senate Bill 434

Senator Branstetter introduced Senate Bill 434 to rebate part of the automatic increase in Oklahoma tax liability generated by the 1986 Federal Tax Reform Act. This proposal would increase the amount of the state's personal exemption from $1,000 to $1,300 in 1988, to $1,600 for 1989 and to $2,000 (the federal personal exemption amount) beyond 1989. The proposal would allow an extra $1,000 exemption for persons over 64 years of age beginning in 1988. However, the new federal tax code does not include an extra exemption for persons over 64 years of age.

Senator Branstetter's proposal is consistent with the implied guidelines of the Oklahoma individual income tax code in that the Oklahoma code was originally designed for Oklahoma taxable income to be approximately the same as federal taxable income.[4] The dissimilarity between the two codes was to be primarily in the marginal rate structure. The dollar value of personal exemptions in the state code was not made an automatic feature but over the years the Legislature has modified this item as this item was modified on the federal tax form. For example, the Oklahoma personal exemption was increased from $750 to $1,000 in 1979 following a similar change in the federal code. The Oklahoma standard deduction was originally in conformity with the federal amount but has not been altered as the federal amount was altered. In fact, at the present time the new change in the federal standard deduction has created a very large difference between the state and the federal amount.

Senate Bill 434 will not be considered in the 1988 legislative session since it is well known that this proposal would rebate a large amount of the additional revenue from the change in the federal tax code. Without the additional revenue from federal tax reform it is likely that the state would be facing another revenue shortfall in fiscal 1989. Consequently, Senate Bill 434 will not be evaluated by the Legislature on its "effectiveness" to rebate a portion of the automatic tax increase produced by the 1986 Federal Tax Reform Act.

However, Senate Bill 434 will be analyzed in this study since it is a very logical first step in adjusting the Oklahoma tax code to once again be in conformity with the federal code. This bill is a very logical first step if there is ever any serious discussion of rebating a portion of the automatic tax increase from the 1986 Federal Tax Reform Act. Also, several states have implemented rebating procedures that are similar to Senate Bill 434.

The relationships defined in the Methodology section were applied to a sample of representative Oklahoma tax returns using the 1990 provisions of Senate Bill 434, i.e. personal exemptions = $2,000 and an extra $1,000 exemption for persons over 64 years of age.[5] The tax returns used for the policy microsimulation were generated from Oklahoma households in the March 1985 Current Population Survey (CPS). Microsimulation is not precise but it is useful for policy analysis.[6] The results obtained are given in Table 1. This table is dissaggregated for tax returns that were unaffected by the Tax Reform Act (i.e. A = B) and returns that have increased tax liability as a consequence of the Tax Reform Act (i.e. A > B). The columns in the table are for "On-Target" and "Off-Target."

In Table 1 it is observed that the tax reduction generated by Senate Bill 434 is estimated to be approximately $138,000,000 per year beginning in 1990. Approximately $104,000,000 or 75 percent of the tax reduction is "On-Target." Consequently, the efficiency rating for Senate Bill 434 is estimated to be 75 percent.

The revenue cost of Senate Bill 434 in 1988 with the personal exemption equal to $1,300 would be approximately $48,000,000 with $44,000,000 "On-Target" and an efficiency rating of approximately 92 percent. The revenue cost of this bill in 1989 with the personal exemption equal to $1,600 would be approximately $87,000,000 with $73,000,000 "On-Target" and an efficiency rating of approximately 84 percent.

The aggregate figures presented in this section differ from the aggregate figures generated by the Oklahoma Tax Commission by approximately 15 percent. The Tax Commission estimates generated from their large (confidential) data base would be expected to be more accurate than the aggregate figures generated in this study using a much smaller (public) data base. However, the inherent distributions are approximately the same in both data files. Consequently, ratio estimates such as the rebating efficiency ratio developed in this study should be approximately the same using either data file.

There is a very definite inverse relationship between rebating efficiency and the amount of the personal exemption. Average rebating efficiency is 92 percent with a personal exemption of $1,300, 84 percent with a personal exemption of $1,600 and 75 percent with a personal exemption of $2,000. However, it is interesting to note that the marginal efficiency of the rebate decreases to only 60 percent when the personal exemption is increased from $1,600 to $2,000. That is, only 60 percent of the additional $51,000,000 revenue cost of increasing the personal exemption from $1,600 to $2,000 would actually be used to offset automatic tax increases produced by the 1986 Federal Tax Reform Act.

Summary and Conclusions

The objective of this article was to analyze Senate Bill 434 as a proposal to rebate a portion of the large automatic tax increase produced by the 1986 Federal Tax Reform Act. The results of this study indicate that the efficiency of this proposal for rebating a portion of the automatic tax increase is only approximately 75 percent.

It was demonstrated in this study that the aggregate amount of a rebate might be misleading, i.e. a large proportion of the rebate might go to the wrong tax returns. Consequently, a methodology was developed to measure how a rebate is actually distributed at the tax return level. This methodology should be useful

TABLE 1

Senate Bill 434's Tax Reduction[a]
(millions of dollars)

Tax Returns	On-Target	Off-Target	Total
A = B	—	$2	$2
A > B	$104	$32	$136
Total	$104	$34	$138

[a]Data Base = Oklahoma Households in the March 1985 Current Population Survey.
Note: Personal exemption = $2,000 and an extra $1,000 exemption for persons over 64.

for evaluating any rebating proposal.

Senate Bill 434 was selected for analysis since it is a logical first step in identifying a rebating proposal if rebating becomes a serious issue in the Oklahoma Legislature. It certainly meets the implied guidelines of the Oklahoma individual income tax code originally specified in 1971. It is also similar to rebating proposals implemented by several other states.

A very definite inverse relationship was observed in this study between efficiency and the amount of the personal exemption. For example, the efficiency of Senate Bill 434 for 1988 using a personal exemption of $1,300 was estimated to be 92 percent with a total rebate of $48,000,000. The efficiency of this bill using a $2,000 personal exemption for 1990 (and beyond) falls to approximately 75 percent with a total rebate of $138,000,000.

Notes

[1]Advisory Commission on Intergovernmental Relations, "Preliminary Estimates of the Effect of the 1986 Federal Tax Reform Act on State Personal Income Tax Liabilities," ACIR (Washington D.C., December 1986).

[2]Scott Turner, "A Microanalytic Simulation of Federal Tax Reform on Oklahoma Tax Filing Units," *The Oklahoma Business Bulletin* (March 1987).

[3]See Advisory Commission on Intergovernmental Relations, ACIR, op. cit.

[4]Ansel Sharp, Scott Turner, and William Stringer, "Revenue and Incidence Effects of the 1971 Oklahoma Tax Code," *The Oklahoma Business Bulletin* (1972).

[5]See Scott Turner, "A Microanalytic Simulation of Federal Tax Reform on Oklahoma Tax Filing Units," op.cit.

[6]Robert H. Haveman, and Keven Hollenbeck, *Microeconomic Simulation Models for Public Policy Analysis* (New York: Academic Press, Inc., 1980).

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